

1. Inductive loop detector installations shall conform to Section 86-5 DETECTORS of the specifications, these notes and the Standard Plan Details.
2. Loop conductors shall be installed without splices and shall terminate in the pull box indicated on the plans. Each loop shall be provided with its own detector lead-in cable. Detector lead-in cables shall be continuous, without splices between the loop termination pull box and the detector panel terminal block in the controller cabinet.
3. All loop conductors and lead-in cables shall be labeled in accordance with CSJ specifications Section 86-2.09, "Wiring".
4. The end of the lead-in cable shall be taped and waterproofed prior to installing in conduit to prevent moisture from entering the cable. Where loop conductors are not immediately to be spliced to a lead-in cable, the ends of both the loop conductors and lead-in cable shall be taped and waterproofed with an electrical insulating coating.
5. All adjacent loops shall be wound in the same direction. No more than 4 loop conductors (2 twisted pairs) shall be installed in one home-run slot. Loop conductors for more than one signal phase shall not be combined in a common home-run slot.
6. Loops shall be centered in lanes and set back 2 feet from stop bar unless specified otherwise. The distance between the side of the loop and the home-run saw cut from the adjacent loops shall be 2 feet minimum. The distance between home-run saw cuts shall be 6 inches minimum. Loop conductors shall be installed a minimum of 3 feet from any metal obstacles in the street such as metal manhole covers.
7. Sawcut slots, of the width and to the depths shown on the Standard Plan Details, shall be cut into the pavement of the locations laid out by the Engineer.
8. Before installing loop conductors in the sawed slots, the slots shall be thoroughly washed out with water and then blown out with compressed air and allowed to dry thoroughly.
9. The loop conductor shall be installed into the slot using a 3/16-inch to 1/4-inch thick wood paddle or roller designed and approved for the purpose.
10. The loop shall be wound in accordance with the standard plan details unless otherwise specified.
11. Four feet of loop conductor slack for each loop, shall be left in the loop termination pull box.
12. The loop conductor home-run for each loop shall have its start (S) and finish (F) conductors twisted together into a pair (at least 3 turns per foot) before being placed in the home-run slot, conduit, and termination pull box.
13. Each loop shall be tested at the termination pull box before the slots are filled with sealant. Each loop shall not exceed 0.5 ohms circuit resistance and not less than 200 meg-ohms insulation resistance. As measured with a 500 VDC megger.
14. All detector loop circuits shall be tested for circuit resistance, insulation resistance, and inductance at the controller cabinet with the drain wires terminated before final termination of the detector lead-in cable to detector panel terminal blocks.
15. The detector loop circuit resistance shall not exceed 0.5 ohms plus 0.35 ohms per 100 feet of lead-in cable. The detector loop circuit insulation resistance shall not be lower than 100 meg-ohms between any conductor and earth ground. The detector loop circuit inductance shall be between 250 and 450 micro-henries for type "C" loops and between 150 and 300 micro-henries for type "Q" loops.

APPROVED BY

*Ans*

DATE

3/3/92

**INDUCTIVE LOOP DETECTORS  
TYPE C AND Q  
NOTES**

DEPARTMENT OF PUBLIC WORKS



DRAWING  
NO.

E-72